

WHAT IS CLAIMED IS:

1           1.     A wireless telephone, including:  
2           an enclosure;  
3           an antenna; and  
4           an antenna system, including,  
5                 a housing containing the antenna, the antenna housing being mounted  
6           to the enclosure for movement between a first position to hold the antenna in a  
7           retracted position and a second position for extending the antenna, and  
8                 a bias member coupled to the antenna housing to bias the antenna  
9           housing toward the second position.

1           2.     A wireless telephone of a type formed from first and second phone  
2           parts pivotally joined together to allow the first phone part to open from a folded position  
3           with the second phone part for use, the first and second phone parts forming an enclosure,  
4           and including:  
5                 an antenna housing mounted to the second phone part for movement from a  
6           first position within the second part to an extended position;  
7                 an antenna mounted in the housing;  
8                 a release element mounted to hold the antenna housing in the first position;  
9           and  
10                 a bias member to bias the antenna housing to the extended position when the  
11           release member is disposed to release the antenna housing.

1           3.     The wireless telephone of claim 2, wherein the bias member is a  
2           spring.

1           4.     The wireless telephone of claim 3, wherein the bias member is a  
2           helical spring.

1           5.     The wireless telephone of claim 2, wherein the antenna housing is  
2           pivotally mounted to the second phone part to pivot to the second position when released by  
3           the release member.

1           6.       The wireless telephone of claim 5, wherein the antenna is  
2       telescopically mounted in the antenna housing to be extracted from the antenna housing when  
3       in the second position.

1           7.       The wireless telephone of claim 2, the release member including tab  
2       formed on the antenna housing, the first phone part having a recess formed and configured to  
3       receive and hold the tab when the first phone part is in the folded position, holding the  
4       antenna housing in the first position.

1           8        A wireless telephone, including;  
2                    an outer shell forming an enclosure having an opening;  
3                    an antenna holder mounted in the enclosure and having an end located  
4       proximate the opening;  
5                    an antenna releasably held in the antenna holder for movement between a  
6       retracted position within the antenna holder and a second position extending from the antenna  
7       holder and through the opening;  
8                    a movable latch member mounted to releasably hold the antenna in the  
9       antenna holder; and  
10                   a bias coupled to the antenna to move the antenna from the first position to the  
11       second position when the moveable latch member is moved to release the antenna.

1           9.       A wireless telephone, including:  
2                    an enclosure for housing working elements of the wireless telephone, the  
3       enclosure having at least a partial recess;  
4                    an antenna system, including,  
5                         an antenna,  
6                         a housing, containing the antenna, pivotally mounted to the enclosure  
7       for movement between a retracted position and an extended position; the recess being  
8       formed and configured to hold the housing when in the retracted position, and  
9                    a bias member coupled to the antenna housing to bias the antenna  
10       housing toward the second position.

1           10.     The wireless telephone of claim 9, wherein the enclosure includes a  
2       first phone part and a second phone part pivotally joined for the first phone part to move from  
3       a folded position juxtaposed with the second phone part to an open position, there being

4 formed in the first part a barrel having a notch, the housing having a terminal end with a tab  
5 formed to extend therefrom captured by the barrel, whereby the housing is released to move  
6 toward the second position when the first phone part rotates from the folded position to the  
7 second position to let the tab pass through the notch.

1 11. A wireless telephone of a type having an enclosure for housing  
2 working and electronic elements of the wireless telephone, the enclosure having at least a  
3 partial recess, and including  
4 an antenna system, including,  
5 an antenna,  
6 a housing, containing the antenna, pivotally mounted to the enclosure  
7 for movement between a retracted position and an extended position; the recess being  
8 formed and configured to hold the housing when in the retracted position, and  
9 a captivation system, including a detent, to releaseably hold the  
10 housing in the retracted and extended positions.

1 12. The wireless telephone of claim 11, wherein the detent includes a  
2 spring mounted to the enclosure and a detent member mounted to the housing.

1 13. The wireless telephone of claim 12, including a bend in the spring, and  
2 wherein the detent member has formed therein first and second notches, spring and detent  
3 member being positioned so that the first notch matingly engages the bend to hold the  
4 housing in the retracted position and the second notch matingly engages the bend to hold the  
5 housing in the extended position.

1 14. The wireless telephone of claim 11, the wherein the antenna is  
2 movably mounted to telescopically extend from and retract into the housing.